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(12) **United States Patent**  
**Kamen et al.**

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(54) **CONTROL OF A PERSONAL TRANSPORTER  
BASED ON USER POSITION**

(71) Applicant: **DEKA Products Limited Partnership**,  
Manchester, NH (US)

(72) Inventors: **Dean Kamen**, Bedford, NH (US);  
**Robert R. Ambrogio**, Manchester, NH  
(US); **James J. Dattolo**, Somerville, MA  
(US); **Robert J. Duggan**, Strafford, NH  
(US); **J. Douglas Field**, Bedford, NH  
(US); **Richard Kurt Heinzmann**,  
Francetown, NH (US); **Matthew M.**  
**McCambridge**, Madison, WI (US);  
**John B. Morrell**, Bedford, NH (US);  
**Michael D. Piedmonte**, Warrenton, VA  
(US); **Richard J. Rosasco**, Millersville,  
MD (US)

(73) Assignee: **DEKA Products Limited Partnership**,  
Manchester, NH (US)

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This patent is subject to a terminal dis-  
claimer.

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See application file for complete search history.

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File History for U.S. Pat. No. 8,453,768, U.S. Appl. No. 11/691,903.

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*Primary Examiner* — Daryl Pope

(74) *Attorney, Agent, or Firm* — McCormick, Paulding &  
Huber LLP

(57) **ABSTRACT**

An apparatus controller for prompting a rider to be positioned  
on a vehicle in such a manner as to reduce lateral instability  
due to lateral acceleration of the vehicle. The apparatus has an  
input for receiving specification from the rider of a desired  
direction of travel, and indicating means for reflecting to the  
rider a propitious instantaneous body orientation to enhance  
stability in the face of lateral acceleration. The indicating may  
include a handlebar that is pivotable with respect to the  
vehicle and that is driven in response to vehicle turning.

**20 Claims, 21 Drawing Sheets**

